November 19, 2001

Mr. Bill F. Burke
Raybestos Products Company
1204 Darlington Avenue
Crawsfordsville, IN 47933

Re: 107-14594-00007
Significant Source Modification to:
Part 70 permit No.: T107-6836-00007

Dear Mr. Burke:

Raybestos Products Company was issued a Part 70 operating permit T107-6836-00007 on April 14, 1999 for operation of a stationary automotive parts manufacturing facility. An application to modify the source was received on June 26, 2001. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(a) Two (2) two lane steel core feeders;

(b) One (1) parts cooling tunnel;

(c) Two (2) two lane wafer droppers; and

(d) Four (4) parts stacker.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call Nishat Hydari at (973) 575-2555, ext. 3216, or call (800) 451-6027, press 0 and ask for extension 3-6878.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
NH/EVP
cc: File - Montgomery County
Montgomery County Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Data Section - Karen Nowak
Administrative and Development - Cynthia Bymaster
Technical Support and Modeling - Michele Boner

(C) Two (2) wafer press/graphite spray booths, exhausting to one (1) stack (14112);

(D) One (1) graphite spray booth, exhausting to one (1) stack (14113); and

(E) Two (2) wafer press/graphite spray booths, exhausting to one (1) stack (14116).

(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:

(A) One (1) HD rollercoater and oven, installed prior to 1974;

(B) One (1) HD dual rollercoater and oven, installed prior to 1974;

(C) One (1) AT rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(D) One (1) AT dual rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;

(F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;

(G) One (1) sample department rollcoater, installed in 1995;

(H) One (1) rollcoating adhesive application system, identified as an addition to P012, with maximum coating rate of 18,000 steel parts per hour, equipped with a natural gas fired thermal oxidizer for VOC and HAP control, with maximum heat input capacity no greater than 8 million British thermal units per hour;

(I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;

(J) One (1) Mini coater for black resin, installed prior to 1974;

(K) One (1) Union Tool rollcoater, installed prior to 1974;

(11) One (1) paper saturation operation, identified as P013, with a maximum capacity of 40,400 paper friction products per hour, consisting of the following equipment:

(A) One (1) post cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16101);

(B) One (1) post cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16102);

(C) One (1) post cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16103);

(D) One (1) post cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16104);

(E) One (1) post cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16105);

(F) One (1) monorail cure oven, installed in 1988, using a thermal oxidizer as control, exhausting to one (1) stack (16125);

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(6) One (1) general cleaning with solvents operation, installed in 1952, identified as P008, exhausting through roof vents, exits, and entrances.

(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:

- (A) One (1) HD rollercoater and oven, installed prior to 1974;
- (B) One (1) HD dual rollercoater and oven, installed prior to 1974;
- (C) One (1) AT rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;
- (D) One (1) AT dual rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;
- (E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;
- (F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;
- (G) One (1) sample department rollcoater, installed in 1995;
- (H) One (1) rollcoating adhesive application system, identified as an addition to P012, with maximum coating rate of 18,000 steel parts per hour, equipped with a natural gas fired thermal oxidizer for VOC and HAP control, with maximum heat input capacity no greater than 8 million British thermal units per hour;
- (I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;
- (J) One (1) Mini coater for black resin, constructed prior to 1974;
- (K) One (1) Union Tool rollcoater, constructed prior to 1974;

(13) One (1) adhesive/saturant formulation and mixing operation, installed in 1988, identified as P017, with a maximum capacity of 2,000 phenolic adhesives gallons per hour, consisting of the following equipment:

- (A) One (1) adhesive process kettle, exhausting to one (1) stack (16201);
- (B) One (1) adhesive process kettle, exhausting to one (1) stack (16202);
- (C) One (1) adhesive process kettle, exhausting to one (1) stack (16203);
- (D) One (1) adhesive process kettle, exhausting to one (1) stack (16204);
- (E) One (1) adhesive process kettle, exhausting to one (1) stack (16205);
- (F) One (1) adhesive process kettle, exhausting to one (1) stack (16206);
- (G) One (1) adhesive process kettle, exhausting to one (1) stack (16207);
- (H) One (1) storage tank, identified as MEK (near rollcoaters), with a maximum capacity of 1,000 gallons of MEK;
- (I) One (1) storage tank, identified as Ethanol (near rollcoaters), with a maximum capacity of 8,000 gallons of ethanol;
- (J) One (1) bulk storage tank T-1, containing ethanol, with maximum storage capacity of 12,000 gallons, exhausting to one (1) stack (16159);
- (K) One (1) bulk storage tank T-2, containing resin, with maximum storage capacity of 13,000 gallons, exhausting to one (1) stack (16160);
- (L) One (1) bulk storage tank T-3, containing resin, with maximum storage capacity of 11,000 gallons, exhausting to one (1) stack (16161);
- (M) One (1) bulk storage tank T-4, containing resin, with maximum storage capacity of 4,200 gallons, exhausting to one (1) stack (16162);
- (N) One (1) bulk storage tank T-5, containing MEK, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16163);
- (O) One (1) bulk storage tank T-7, containing resin, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16164);

(P) One (1) bulk storage tank T-6, containing resin, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16165);
(Q) One (1) day tank T-14, containing blended resin, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16153);
(R) One (1) day tank T-13, containing blended resin, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16154);
(S) One (1) day tank T-12, containing blended resin, with maximum storage capacity of 1,500 gallons, exhausting to one (1) stack (16155);
(T) One (1) day tank T-10, containing blended resin, with maximum storage capacity of 1,500 gallons, exhausting to one (1) stack (16156);
(U) One (1) day tank T-9, containing blended resin, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16157);
(V) One (1) day tank T-8, containing blended resin, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16158);
(W) One (1) day tank T-16, identified as wash out bed 2, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16170); and
(X) One (1) day tank T-17, identified as wash out bed 1, with maximum storage capacity of 1,000 gallons, exhausting to one (1) stack (16171).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility (the rollcoating adhesive application system (the addition to P012)) engaged in the surface coating of steel parts may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.5 pounds of VOC per gallon of coating, excluding water, as applied by the coating applicator for a forced warm air dried system.

(b) When operating the thermal oxidizer to achieve the limit for 326 IAC 8-2-9, 3.5 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain a minimum 90% overall VOC control efficiency. These efficiencies and the use of the thermal oxidizer are required by 326 IAC 8-1-2(a)(2). Based upon 326 IAC 8-1-2(c) and the overall control efficiency of 90%, the VOC content of the coating shall not exceed 67 pounds per gallon of coating solids delivered to the applicator.

(C) Pursuant 326 IAC 8-1-2(a)(9), an equivalent emission limit for 326 IAC 8-2-9 may be established based on an actual measured transfer efficiency using EPA approved test methods. This condition must be amended to state any such equivalent limit.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8]

Any change or modification to any of these facilities except the rollcoating adhesive application system (the addition to P012) that would lead to an increase in volatile organic compound (VOC) emissions above twenty-five (25) tons per year must be approved by the Office of Air Management (OAM) before such change or modification can occur.

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the one (1) adhesive rollcoating operation and any control devices.

Compliance Determination Requirements

D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

The Permittee is not required to test the general cleaning with solvents operation and the adhesive/saturant formulation operation by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the volatile organic compound (VOC) limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 60 days of achieving maximum production, the Permittee shall perform VOC testing to show compliance with Condition D.3.1 and 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) for the one (1) rollcoating adhesive application system (the addition to P012) utilizing Method 25, 40 CFR 60, Appendix A, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.3.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.7 Monitoring

Monitoring of the general cleaning with solvents operation and the adhesive/saturant formulation operation is not required by this permit. However, any change or modification to this facility as specified in 326 IAC 2-1 would require this facility to have monitoring requirements.

D.3.8 Volatile Organic Compound (VOC)

Pursuant to Construction Permit (CP 107-8186-00007) issued on June 5, 1997, the thermal oxidizer for VOC control shall be in operation at all times when the one (1) rollcoating adhesive application system (the addition to P012) is in operation. When the thermal oxidizer is operating, a minimum operating temperature of 1400F shall be maintained or a temperature, fan amperage and duct velocity determined in the compliance tests to maintain at least 90 percent overall control (including capture and destruction) efficiency of VOC emissions.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Conditions D.3.1, and D.3.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1, and D.3.2.

(1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used:

(2) The solvent usage for each month;

(3) The total VOC and HAP usage for each month; and

(4) The weight of VOC and HAP emitted for each compliance period.

(b) To document compliance with Condition D.3.7, the Permittee shall maintain a daily log of oxidizer operating temperatures.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Raybestos Products Company
1204 Darlington Avenue
Crawsfordsville, Indiana 47933

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that Raybestos Products Company, 1204 Darlington Avenue, Crawsfordsville, Indiana, 47933, completed construction of the two (2) two lane steel core feeders, one (1) parts cooling tunnel, two (2) two lane wafer dropper and four (4) parts stacker on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on June 26, 2001 and as permitted pursuant to **Significant Source Modification No. 107-14594, Plant ID No. 107-00007** issued on _____

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Significant Source Modification and Significant Permit Modification to a Part 70 Operating Permit

Source Name:	Raybestos Products Company
Source Location:	1204 Darlington Avenue, Crawfordsville, IN 47933
County:	Montgomery
Operation Permit No.:	SSM 107-14594-00007 and SPM 107-14857-00007
SIC Code:	3714
Permit Reviewer:	NH/EVP

On September 12, 2001, the Office of Air Quality (OAQ) had a notice published in the Journal Review, Crawfordsville, Indiana, stating that Raybestos Products Company had applied for a Significant Source Modification to their existing Part 70 permit to operate a stationary automotive parts manufacturing operation. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On October 12, 2001, John Wellspring, consultant for Raybestos Products Company submitted comments on the proposed FESOP. The summary of the comments is as follows:

Comment 1

Since submittal of the permit application for the modification, Raybestos has decided not to proceed with plans to install the continuous conveyor cleaning operation associated with the above-reference adhesive roll coat application system. Raybestos now plans only to increase the throughput of the system.

This decision will affect the proposed permit modification in the following ways:

- Methyl Ethyl Ketone (MEK) will not be emitted from the roll coating process;
- The proposed project will not have the potential to emit more than 10 tons per year of controlled HAP (MEK) emissions, and;
- Raybestos should not need to take an emission limitation to avoid applicability of Rule 326 IAC 2-4.1-1, pertaining to New Source Toxics Control.

In consideration of the above, and after review of the Draft Operating Permit modifications, Raybestos would like to offer the following comments regarding the Draft.

Regarding the description of the proposed project, Raybestos would respectfully like to point out that the existing adhesive roll coating system, referred to in the current Part 70 permit as item (H), "One rollcoating adhesive application system, identified as the addition to P012,..." already consists of the Two, two-lane steel core feeders, the One parts cooling tunnel, the Two, two-lane wafer droppers, and the Four parts stackers, listed in the Draft as items (L), (M), (N) and (O). Therefore, these items should not be listed separately under items (10) on pages 9 and 47 of the Draft. Should these items need to be listed, they should be included in the description under item (10) (H). Furthermore, the description given for the "One rollercoating adhesive application system..." under item (10) (H) should indicate that control is "by thermal oxidizer for VOC and HAP control" with heat input capacity of 8 million BTU/hr, as was previously corrected in the First Administrative Amendment issued December 7, 1999. Also stricken from the permit during the previous Amendment, was the requirement on page 50 to conduct quarterly catalyst efficiency tests, as the thermal oxidizer does not have catalyst that can be tested. This condition should again be stricken.

Response 1

The following changes have been made to Section A.2.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:

(A) One (1) HD rollercoater and oven, installed prior to 1974;

(B) One (1) HD dual rollercoater and oven, installed prior to 1974;

(C) One (1) AT rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(D) One (1) AT dual rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;

(F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;

(G) One (1) sample department rollcoater, installed in 1995;

(H) One (1) rollcoating adhesive application system, identified as an addition to P012, with maximum coating rate of 18,000 steel parts per hour, equipped with a natural gas fired ~~catalytic~~ **thermal** oxidizer for VOC and HAP control, with maximum heat input capacity no greater than ~~3.6~~ **8** million British thermal units per hour;

(I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;

(J) One (1) Mini coater for black resin, installed prior to 1974;

(K) One (1) Union Tool rollcoater, installed prior to 1974;

~~(L) Two (2) two lane steel core feeders;~~

~~(M) One (1) parts cooling tunnel;~~

~~(N) Two (2) two lane wafer droppers; and~~

~~(O) Four (4) parts stacker.~~

The following revisions have been made to the facility description box in Section D.3.

Facility Description [326 IAC 2-7-5(15)]

(6) One (1) general cleaning with solvents operation, installed in 1952, identified as P008, exhausting through roof vents, exists, and entrances.

(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:

(A) One (1) HD rollcoater and oven, installed prior to 1974;
(B) One (1) HD dual rollcoater and oven, installed prior to 1974;
(C) One (1) AT rollcoater and oven, installed in 1976, using a catalytic oxidizer as control;
(D) One (1) AT dual rollcoater and oven, installed in 1976, using a catalytic oxidizer as control;
(E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;
(F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;
(G) One (1) sample department rollcoater, installed in 1995;
(H) One (1) rollcoating adhesive application system, identified as an addition to P012, with a maximum coating rate of 18,000 steel parts per hour, equipped with a natural gas fired ~~catalytic~~ **thermal** oxidizer for VOC and HAP control, with maximum heat input capacity no greater than ~~3.6~~ **8** million British thermal units per hour;
(I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;
(J) One (1) Mini coater for black resin, constructed prior to 1974;
(K) One (1) Union Tool rollcoater, constructed prior to 1974;
~~(L) Two (2) two lane steel core feeders;~~
~~(M) One (1) parts cooling tunnel;~~
~~(N) Two (2) two lane wafer droppers; and~~
~~(O) Four (4) parts stacker.~~

(13) One (1) adhesive/saturant formulation and mixing operation, installed in 1988, identified as P017, with a maximum capacity of 2,000 phenolic adhesives gallons per hour, consisting of the following equipment:

(A) One (1) adhesive process kettle, exhausting to one (1) stack (16201);
(B) One (1) adhesive process kettle, exhausting to one (1) stack (16202);
(C) One (1) adhesive process kettle, exhausting to one (1) stack (16203);
(D) One (1) adhesive process kettle, exhausting to one (1) stack (16204);
(E) One (1) adhesive process kettle, exhausting to one (1) stack (16205);
(F) One (1) adhesive process kettle, exhausting to one (1) stack (16206);
(G) One (1) adhesive process kettle, exhausting to one (1) stack (16207);
(H) One (1) storage tank, identified as MEK (near rollcoaters), with a maximum capacity of 1,000 gallons of MEK;
(I) One (1) storage tank, identified as Ethanol (near rollcoaters), with a maximum capacity of 8,000 gallons of ethanol;
(J) One (1) bulk storage tank T-1, containing ethanol, with maximum storage capacity of 12,000 gallons, exhausting to one (1) stack (16159);
(K) One (1) bulk storage tank T-2, containing resin, with maximum storage capacity of 13,000 gallons, exhausting to one (1) stack (16160);
(L) One (1) bulk storage tank T-3, containing resin, with maximum storage capacity of 11,000 gallons, exhausting to one (1) stack (16161);
(M) One (1) bulk storage tank T-4, containing resin, with maximum storage capacity of 4,200 gallons, exhausting to one (1) stack (16162);
(N) One (1) bulk storage tank T-5, containing MEK, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16163);
(O) One (1) bulk storage tank T-7, containing resin, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16164);

The following changes have been made to Condition D.3.10(b).

D.3.10 Record Keeping Requirements

(a) To document compliance with Conditions D.3.1, D.3.2 and D.3.3, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1, D.3.2 and D.3.3.

(1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used:

(2) The volume weighted VOC and HAP content of the coatings and solvents used for each day that any coating with VOC content greater than 3.5 pounds per gallon is used. If at any time a coating with VOC content greater than 3.5 pounds per gallon less water is used, compliance with this rule shall be shown by the use of the following equation to calculate daily volume weighted average:

$$\frac{\text{lb VOC}}{\text{gallon less water}} = \frac{\sum_{3\text{ coatings}} [Dc * O * Q / [1 - W * Dc / Dw]]}{3C}$$

Dc = density of coating, lb/gal
O = weight percent organics, %
W = percent volume water, %
Dw = density of water, lb/gal
Q = quantity of coating, gal/unit
C = total of coatings used, gal/unit;

(3) The solvent usage for each month;

(4) The total VOC and HAP usage for each month; and

(5) The weight of VOC and HAP emitted for each compliance period.

(b) To document compliance with Condition D.3.8, the Permittee shall maintain a daily log of oxidizer operating temperatures ~~and quarterly catalyst efficiency tests~~.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 2

In regard to the new section D.3.3 on page 48 of the Draft, Raybestos respectfully requests that this requirement, and the associated quarterly report requirement (given as new section D.3.11) and quarterly report form (included as page 60a of the Draft), be removed. These sections were presumably added because a limitation was needed to prohibit controlled actual MEK emissions from exceeding 10 tons per year. Now that Raybestos has decided not to proceed with plans to install the continuous conveyor cleaning operation, and potential emissions do not trigger the New Source Toxics Control requirements of 326 IAC 2-4.1-1, there is no longer a need to limit HAP emissions to less than 10 tons per year by permit condition, and to report actual emissions on a quarterly basis.

Response 2

Conditions D.3.3 and D.3.11 and the quarterly report form will be deleted from the permit. The rest of Section D.3 will be re-numbered accordingly.

Comment 3

Section D.3.1(b) of the draft indicates that the thermal oxidizer shall maintain "a minimum 95% capture efficiency and 95% destruction efficiency". Raybestos respectfully requests that this condition be changed to instead read "a minimum 90% overall VOC control efficiency". This preferred equivalent statement allows Raybestos greater flexibility in achieving the control requirements of this permit, and is consistent with the permit condition given in Section D.3.9.

Response 3

The following changes have been made to Condition D.3.1.

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility (the rollcoating adhesive application system (the addition to P012)) engaged in the surface coating of steel parts may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.5 pounds of VOC per gallon of coating, excluding water, as applied by the coating applicator for a forced warm air dried system.

(b) When operating the thermal oxidizer to achieve the limit for 326 IAC 8-2-9, 3.5 pounds of VOC emitted to the atmosphere per gallon of coating less water delivered to the applicator, the thermal oxidizer shall maintain ~~a minimum 95% capture efficiency and 95% destruction efficiency~~ **a minimum 90% overall VOC control efficiency**. These efficiencies and the use of the thermal oxidizer are required by 326 IAC 8-1-2(a)(2). Based upon 326 IAC 8-1-2(c) and the overall control efficiency of 90%, the VOC content of the coating shall not exceed 67 pounds per gallon of coating solids delivered to the applicator.

(c) Pursuant 326 IAC 8-1-2(a)(9), an equivalent emission limit for 326 IAC 8-2-9 may be established based on an actual measured transfer efficiency using EPA approved test methods. This condition must be amended to state any such equivalent limit.

Comment 4

In regard to Section D.3.10(a) of the Draft, Raybestos would like to note that it achieves compliance with the requirements of 326 IAC 8-2-9 in accordance with equivalent control requirements prescribed by 326 IAC 8-1-2, and not be volume weighted averaging, as described by Section D.3.10(a)(2).

Response 4

The following changes have been made to Condition D.3.10(a) (now re-numbered D.3.9(a)).

D.3.~~10~~**9** Record Keeping Requirements

(a) To document compliance with Conditions D.3.1, ~~D.3.2~~ and D.3.~~3~~**2**, the Permittee shall maintain records in accordance with (1) through (~~5~~**4**) below. Records maintained for (1) through (~~5~~**4**) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1, ~~D.3.2~~ and D.3.~~3~~**2**.

(1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used:

~~(2) The volume weighted VOC and HAP content of the coatings and solvents used for each day that any coating with VOC content greater than 3.5 pounds per gallon is used. If at any time a coating with VOC content greater than 3.5 pounds per gallon less water is used, compliance with this rule shall be shown by the use of the following equation to calculate daily volume weighted average:~~

~~$$\frac{\text{lb VOC}}{\text{gallon less water}} = \frac{3 \text{ coatings } [Dc * O * Q / [1 - W * Dc / Dw]]}{3C}$$~~

~~Dc = density of coating, lb/gal~~
~~Dw = density of water, lb/gal~~
~~O = weight percent organics, %~~
~~Q = quantity of coating, gal/unit~~
~~W = percent volume water, %~~
~~C = total of coatings used, gal/unit;~~

(~~3~~**2**) The solvent usage for each month;

(~~4~~**3**) The total VOC and HAP usage for each month; and

(~~5~~**4**) The weight of VOC and HAP emitted for each compliance period.

(b) To document compliance with Condition D.3.~~8~~**7**, the Permittee shall maintain a daily log of oxidizer operating temperatures.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and a Significant Permit Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	Raybestos Products Company
Source Location:	1204 Darlington Avenue, Crawsfordsville, IN 47933
County:	Montgomery
SIC Code:	3714
Operation Permit No.:	T107-6836-00007
Operation Permit Issuance Date:	April 14, 1999
Significant Source Modification No.:	107-14594-00007
Significant Permit Modification No.:	107-14857-00007
Permit Reviewer:	NH/EVP

The Office of Air Quality (OAQ) has reviewed a modification application from Raybestos Products Company relating to the operation of a stationary automotive parts manufacturing operation.

History

On June 26, 2001, Raybestos Products Company submitted an application to the OAQ requesting to increase the allowable throughput of an adhesive rollcoater (referred to as “the addition to P012" in its Part 70 Operating Permit) and to add additional equipment for continuous cleaning of the rollcoater conveyor. Emissions from both the rollcoating operation and the conveyor cleaning operation are proposed to be routed to the existing thermal oxidizer control device. This proposed modification is being requested to address quality control issues associated with cleanliness of the rollcoater conveyors, and to provide additional hourly production capacity. Raybestos Products Company was issued a Part 70 permit (T107-6836-00007) on April 14, 1999.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-7-5(16):

(a) Two (2) two lane steel core feeders;

(b) One (1) parts cooling tunnel;

(c) Two (2) two lane wafer droppers; and

(d) Four (4) parts stacker.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source was issued a Part 70 Operating Permit (T107-6836-00007) on April 14, 1999. The source has since received the following:

(a) First Administrative Amendment No.: 107-11435-00007, issued on December 7, 1999; and

(b) First Significant Permit Modification No.: 107-12810-00007, issued on January 23, 2001.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 26, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 2).

Potential To Emit Before Controls (Modification)

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	0.00
PM-10	0.00
SO_2	0.00
VOC	376.14
CO	0.00
NO_x	0.00

HAP's	Potential To Emit (tons/year)
Methanol	17.09
Phenol	6.36
Formaldehyde	0.76
Methyl Ethyl Ketone	219.26
TOTAL	243.47

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4)(D) because the source has the potential to emit VOC greater than 25 tons per year. This source modification will give the source approval to construct the new emission units.

This Part 70 Operating permit is also being modified through a Part 70 Significant Permit Modification. This modification is being performed pursuant to 326 IAC 2-7-12(d)(1) which states the following:

"Significant modification procedures shall be used for application requesting Part 70 permit modifications that do not qualify as minor permit modifications or as administrative amendments. Every significant change in existing monitoring Part 70 permit terms or conditions and every relaxation of reporting or record keeping permit terms or conditions shall be considered significant".

County Attainment Status

The source is located in Montgomery County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Montgomery County has been designated as attainment or unclassifiable for ozone.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Single HAP	HAPs
Addition to P012	--	--	--	37.61	--	--	9.90	10.99
Total Emissions	--	--	--	37.61	--	--	< 10	< 25

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). This modification is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control) because the source has taken a limit to control single HAP emissions to less than 10 tons per year and total HAP emissions to less than 25 tons per year.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the one (1) rollcoating adhesive application system, identified as an addition to P012, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

Compliance Requirements

Permits issued under 326 IAC 2-7are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this source.

Changes Proposed

1) The following changes have been made to Section A.2 (10).

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:

(A) One (1) HD rollercoater and oven, installed prior to 1974;

(B) One (1) HD dual rollercoater and oven, installed prior to 1974;

(C) One (1) AT rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(D) One (1) AT dual rollercoater and oven, installed in 1976, using a catalytic oxidizer as control;

(E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;

(F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;

(G) One (1) sample department rollcoater, installed in 1995;

(H) One (1) rollcoating adhesive application system, identified as an addition to P012, with maximum coating rate of ~~14,400~~ **18,000** steel parts per hour, equipped with a natural gas fired catalytic oxidizer for VOC and HAP control, with maximum heat input capacity no greater than 3.6 million British thermal units per hour;

(I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;

(J) One (1) Mini coater for black resin, installed prior to 1974; ~~and~~

(K) One (1) Union Tool rollcoater, installed prior to 1974~~.~~ **;**

(L) Two (2) two lane steel core feeders;

(M) One (1) parts cooling tunnel;

(N) Two (2) two lane wafer droppers; and

(O) Four (4) parts stacker.

2) The following revisions have been made to the facility description box in Section D.3.

Facility Description [326 IAC 2-7-5(15)]
(6) One (1) general cleaning with solvents operation, installed in 1952, identified as P008, exhausting through roof vents, exists, and entrances.
(10) One (1) adhesive rollcoating operation, identified as P012, with a maximum capacity of 40,000 steel discs per hour, consisting of the following equipment:
- (A) One (1) HD rollcoater and oven, installed prior to 1974;
- (B) One (1) HD dual rollcoater and oven, installed prior to 1974;
- (C) One (1) AT rollcoater and oven, installed in 1976, using a catalytic oxidizer as control;
- (D) One (1) AT dual rollcoater and oven, installed in 1976, using a catalytic oxidizer as control;
- (E) One (1) Rayflex rollcoater, installed in 1974, identified as P004;
- (F) One (1) adhesive spray booth, installed in 1964, using dry filters as control;
- (G) One (1) sample department rollcoater, installed in 1995;
- (H) One (1) rollcoating adhesive application system, identified as an addition to P012, with a maximum coating rate of ~~14,400~~ **18,000** steel parts per hour, equipped with a natural gas fired catalytic oxidizer for VOC and HAP control, with maximum heat input capacity no greater than 3.6 million British thermal units per hour;
- (I) One (1) natural gas fired cure oven, rated at 1.6 million British thermal units per hour;
- (J) One (1) Mini coater for black resin, constructed prior to 1974; ~~and~~
- (K) One (1) Union Tool rollcoater, constructed prior to 1974~~.~~ **;**
- **(L) Two (2) two lane steel core feeders;**
- **(M) One (1) parts cooling tunnel;**
- **(N) Two (2) two lane wafer droppers; and**
- **(O) Four (4) parts stacker.**

(13) One (1) adhesive/saturant formulation and mixing operation, installed in 1988, identified as P017, with a maximum capacity of 2,000 phenolic adhesives gallons per hour, consisting of the following equipment:
- (A) One (1) adhesive process kettle, exhausting to one (1) stack (16201);
- (B) One (1) adhesive process kettle, exhausting to one (1) stack (16202);
- (C) One (1) adhesive process kettle, exhausting to one (1) stack (16203);
- (D) One (1) adhesive process kettle, exhausting to one (1) stack (16204);
- (E) One (1) adhesive process kettle, exhausting to one (1) stack (16205);
- (F) One (1) adhesive process kettle, exhausting to one (1) stack (16206);
- (G) One (1) adhesive process kettle, exhausting to one (1) stack (16207);
- (H) One (1) storage tank, identified as MEK (near rollcoaters), with a maximum capacity of 1,000 gallons of MEK;
- (I) One (1) storage tank, identified as Ethanol (near rollcoaters), with a maximum capacity of 8,000 gallons of ethanol;
- (J) One (1) bulk storage tank T-1, containing ethanol, with maximum storage capacity of 12,000 gallons, exhausting to one (1) stack (16159);
- (K) One (1) bulk storage tank T-2, containing resin, with maximum storage capacity of 13,000 gallons, exhausting to one (1) stack (16160);
- (L) One (1) bulk storage tank T-3, containing resin, with maximum storage capacity of 11,000 gallons, exhausting to one (1) stack (16161);
- (M) One (1) bulk storage tank T-4, containing resin, with maximum storage capacity of 4,200 gallons, exhausting to one (1) stack (16162);
- (N) One (1) bulk storage tank T-5, containing MEK, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16163);
- (O) One (1) bulk storage tank T-7, containing resin, with maximum storage capacity of 4,500 gallons, exhausting to one (1) stack (16164);

3) A new Condition D.3.3 has been added to the permit to include the HAP limits. The rest of the conditions have been re-numbered accordingly.

D.3.3 HAP Limit [326 IAC 2-4.1-1]

Single hazardous air pollutant (HAP) input usage to the one (1) rollcoating adhesive application system, identified as an addition to P012, shall be limited to less than ten (10) tons per twelve (12) consecutive month period, and total combined HAP input usage shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

4) The following revisions have been made to Condition D.3.9 (now re-numbered D.3.10).

D.3.~~9~~**10** Record Keeping Requirements

(a) To document compliance with Conditions D.3.1**, D.3.2** and D.3.~~2~~**3**, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.3.1**, D.3.2** and D.3.~~2~~**3**.

(1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used:

(2) The volume weighted VOC and HAP content of the coatings and solvents used for each day that any coating with VOC content greater than 3.5 pounds per gallon is used. If at any time a coating with VOC content greater than 3.5 pounds per gallon less water is used, compliance with this rule shall be shown by the use of the following equation to calculate daily volume weighted average:

$$\frac{\text{lb VOC}}{\text{gallon less water}} = \frac{3 \text{ coatings } [Dc * O * Q / [1 - W * Dc / Dw]]}{3C}$$

Dc = density of coating, lb/gal
Dw = density of water, lb/gal
O = weight percent organics, %
Q = quantity of coating, gal/unit
W = percent volume water, %
C = total of coatings used, gal/unit;

(3) The solvent usage for each month;

(4) The total VOC and HAP usage for each month; and

(5) The weight of VOC and HAP emitted for each compliance period.

(b) To document compliance with Condition D.3.8, the Permittee shall maintain a daily log of oxidizer operating temperatures and quarterly catalyst efficiency tests.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

5) A new Condition D.3.11 has been added to the permit.

D.3.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

6) A new reporting form has been added to the permit to show compliance with Condition D.3.3.

Conclusion

This modification shall be subject to the conditions of the attached proposed **Significant Source Modification No. 107-14594-00007**.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Raybestos Products Company
Address City IN Zip: 1204 Darlington Ave, Crawfordsville, IN
Title V Significant Source Modification: 107-14594
Plt ID: 107-00007
Reviewer: NH/EVP

Material	Process	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Coating																	
84048 Ray-bond adhesive	Adhesive Rollcoating	8.6	50.00%	4.0%	46.0%	4.0%	45.00%	0.00032	18000.000	4.12	3.96	22.79	546.88	99.81	0.00	8.79	100%
Ethanol (Reducer)	Adhesive Rollcoating	6.8	100.00%	5.0%	95.0%	4.0%	0.00%	0.000082	18000.000	6.73	6.46	9.53	228.84	41.76	0.00	ERR	100%
Clean-up Solvent																	
MEK belt clean-up solvent	Adhesive Rollcoating	6.8	100.00%	0.0%	100.0%	0.0%	0.00%	0.00041	18000.000	6.80	6.80	50.18	1204.42	219.81	0.00	ERR	100%
Thinner (to maintain viscosity of adhesive)																	
Ethanol (Thinner)	Adhesive Rollcoating	6.8	100.00%	5.0%	95.0%	4.0%	0.00%	0.000029	18000.000	6.73	6.46	3.37	80.93	14.77	0.00	ERR	100%
State Potential Emissions				**Add worst case coating to all solvents**								**85.88**	**2061.06**	**376.14**	**0.00**		

Controlled Potential Emissions

	Control Efficiency % VOC	Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year
Total Controlled Potential Emissions:	90.00%	**8.59**	**206.11**	**37.61**

Note: VOC emissions are controlled by a thermal oxidizer with a control efficiency of 90%.

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Raybestos Products Company
Address City IN Zip: 1204 Darlington Ave, Crawfordsville, IN
Title V Significant Source Modification: 107-14594
Plt ID: 107-00007
Reviewer: NH/EVP

Material	Process	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Methanol	Weight % Phenol	Weight % Formaldehyde	Weight % Methyl Ethyl Ketone	Methanol Emissions (ton/yr)	Phenol Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Methyl Ethyl Ketone Emissions (ton/yr)
Coating												
84048 Ray-bond adhesive	Adhesive Rollcoating	8.6	0.000320	18000.00	4.23%	2.93%	0.35%	0.00%	9.18	6.36	0.76	0.00
Ethanol (Reducer)	Adhesive Rollcoating	6.8	0.000082	18000.00	13.30%	0.00%	0.00%	0.00%	5.85	0.00	0.00	0.00
Clean-up solvent												
MEK belt clean-up solvent	Adhesive Rollcoating	6.8	0.000410	18000.00	0.00%	0.00%	0.00%	99.75%	0.00	0.00	0.00	219.26
Thinner (to maintain viscosity of adhesive)												
Ethanol (Thinner)	Adhesive Rollcoating	6.8	0.000029	18000.00	13.30%	0.00%	0.00%	0.00%	2.07	0.00	0.00	0.00
Total State Potential Emissions									**17.09**	**6.36**	**0.76**	**219.26**

Total Uncontrolled HAPs (tons/yr) = 243.47

Material Usage Limitation	Control Efficiency (VOC/HAP)	Controlled Ethylbenzene Emissions	Controlled Xylene Emissions	Controlled Toluene Emissions	Controlled Methyl Ethyl Ketone Emissions
45.13%	90.00%	**0.77**	**0.29**	**0.03**	**9.90**

Total Controlled HAPs (tons/yr) = 10.99

Note: At a 45.13% material usage limitation and a thermal oxidizer control efficiency of 90%, single HAP emissions are limited to less than 10 tons/yr and total HAP emissions are limited to less than 25 tons/yr.

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs